

## FOREIGN DEPARTMENT



IN CHARGE OF  
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### THE PASTEUR INSTITUTE AND HOSPITAL IN PARIS

To understand the Pasteur Institute in Paris one must read the Life of Pasteur, and surely there has been no more beneficent and beautiful life,—none more single-hearted and unselfish in the quest of truth and knowledge, in the purpose of reducing the ills from which living beings have suffered in the past through error and ignorance. Pasteur's biographer says of him "The work of Pasteur is admirable; it shows his genius, but one must have enjoyed his intimate friendship to know the extent of his heart's goodness." \*

Pasteur was born in 1822, and twenty years later came to Paris to study chemistry. He is described as a grave, sincere, almost shy youth whose unobtrusive manners covered an immense enthusiasm and generous emotions. This great man, who was to revolutionize medical science and fight to the death an ancient and orthodox medical belief in the spontaneity of disease, never studied medicine. There were times when he regretted this, for many of his contemporaries were jealous of chemists and made him feel that he was not in the charmed circle. When he was elected Associate of the Academy of Medicine it was only by a majority of one. Some of the orthodox of that day had queer sacerdotal ideas;—there were those, for instance, who held that "physiology could not be of any utility in medicine, and was only a '*science de luxe*' which could perfectly well be dispensed with."

There were, however, others more awake, for another great man, Lister, who brought about the technical revolution in surgical methods, wrote to Pasteur in 1874 in a charming letter that his work had first aroused his—Lister's—attention to the germs of putrefaction, so that these two heroes of science may be regarded as having gone forward together.

Pasteur's work is divided by Vallery into three epochs, developing from his three great discoveries, namely: 1. Every fermentation is

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\* *La vie de Pasteur*, by René Vallery, Paris, 1900.

the product of the growth of a special microbe. 2. Every infectious or contagious disease is caused by the growth within the organism of a special microbe. 3. The microbe of an infectious malady, cultivated under certain fixed conditions, becomes attenuated in its noxious activity. From a virus it becomes a vaccine.

Thus Pasteur successively completed his studies in alcoholic fermentation, and lactic acid fermentation, which have been of such great benefit to industrial production; studied and solved the silk-worm disease, and then, impelled always by an intense love of humanity, turned his attention to virus-ferments and did his great work in the diseases of animals and men. Here again he met bitter opposition from the old school, who refused to admit any similarity between veterinary medicine and the treatment of human beings. The thought of anti-toxins was first his, and patiently and with confidence he carried on his experiments until he had perfected the serums with which to destroy dreaded infectious diseases of sheep, chickens, hogs, cattle, and, finally, of dogs and man.

The enormous economic value of Pasteur's discoveries was indicated by Huxley, who said that they had more than saved, up to his time, the sum of five billions paid by France to Germany in 1870. The work of Pasteur laid the ground-work of modern preventive medicine. He felt this, and wrote in 1877 to Bastian, one of his opponents:

Do you know why I consider it so important to combat with and to defeat you? It is because you are one of the special believers in the medical doctrine of the spontaneity of maladies, which is, in my opinion, fatal to the progress of the healing art.

His studies in spontaneous generation, with the famous resulting dictum "no life except from previous life" were begun in 1860. If, to-day, the researches of Dr. Loeb and others seem to be approaching a solution of the first alteration of inanimate matter into a living tissue, yet for practical purposes in the treatment of disease, in nursing, and in prevention of contagions, this dictum "no life except from previous life" will never be overthrown, and Pasteur himself always admitted, and with reverence, the mystery of the transformation of inorganic into organic matter, and this mystery he did not attempt to explain. His work was to show how infectious diseases might be robbed of their terrors, and how their mysteries might be explained. It was as a result of his investigations into hydrophobia that the first steps toward the Institute were taken. The Academy of Sciences had appointed a committee to examine the question, and it recommended the opening of an

institute for the treatment of rabies. The subscriptions opened were international, for these patients had been coming from all over the continent and even from America, and the Institute was opened in 1888. It rapidly became too small, and, in 1894, after a dynamic report read at Buda-Pesth by Dr. Roux, Pasteur's intimate pupil and colleague, upon the results of treatment of diphtheria by the serum of Behring and Kitasato, a fresh subscription was opened by the "Figaro" to establish a stock-farm for the manufacture of the diphtheria antitoxin. Subsequently, the Baroness de Hirsch gave the funds to enlarge the Institute by the erection of a new chemical laboratory, and an anonymous benefactress built a model hospital of one hundred beds for the treatment of contagious cases. Even yet, the Institute is not complete on all lines as indicated by the various studies inaugurated by Pasteur, but it will doubtless continue to develop, and in the meantime it is in the relation of a motherhouse to numerous similar "Pasteur Institutes" that have been established in many parts of the world. It is not under the control of the *Assistance Publique*, but has its own government. The hospital therefore is not in the group of municipal hospitals.

Pasteur is buried in the Bacteriological Building. His tomb stands in the midst of a vault somewhat resembling a small chapel. Its walls and ceiling are covered with mosaics which symbolize the works of the great master; on green fields wander the fowls, the sheep, the fat piggy, and the herds; the silk-worm weaves its cocoon and the vine with purple grapes decorates the border. On the ceiling are the allegorical figures of Faith, Hope, and Charity; and to them has been added a fourth figure—Science.

Over the entrance steps are the beautiful words of Pasteur:

*Heureux celui porte en soi un Dieu, un idéal de Beauté,  
Et qui lui obéit.  
Idéal de l'Art, idéal de la Science,  
Idéal de la Patrie,  
Idéal des vertus de l'Evangile.\**

In the Bacteriological Building are the divisions for the treatment of rabies, and the laboratories for the preparation of antirabic vaccine from the brains of inoculated rabbits; rooms for the making of culture media, dark rooms for microscopic photography, a room for dissection

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\* Happy is he who bears within himself a Divinity, an ideal of Beauty, and who obeys it: ideal of Art, ideal of Science, ideal of Country, ideal of the virtues of the Gospel.

of large animals, and laboratories for agricultural *microbie*. There are also the extensive and perfectly equipped suites for original research work, under the direction of Metchnikoff, Chamberland, and Roux, and the suites for study courses in bacteriological technique, and the dispensaries for the different vaccines to immunize live stock against their most formidable diseases.

In the serumtherapy division all the wonderful antitoxins are made: that of diphtheria, of tetanus, of the plague, and the antistreptococcic serum. The use of the antitetanic serum is now obligatory in the army.

It is impossible for me to give even an outline of all the many departments and services of this temple of science, nor do I wish to describe the hospital for animals nor the colonies of the various animals, large and small. Vast and unspeakable as are the benefits conferred upon man and upon the animal world as well, by these researches of science, one feels more than ever convinced that experiments on animals should be regulated and supervised by the government or by special commissioners, with the severest scrutiny, and only permitted under the direction of men who, like Pasteur and his colleagues, are humane as well as scientific.

In spite of myself I could not restrain a sensation of horror in learning that under Metchnikoff's direction a search for an immunizing or curative serum against syphilis is now being conducted by experiments on monkeys. A disease whose cause is perfectly well known, and whose prevention lies in sexual morality—will not such a serum simply make immorality safe and remove the one deterrent that is most potent by removing the fear of disease?

I asked something of this kind, but the physician who was showing us about said "Think though that the greatest number of victims are innocent." Nevertheless, I insisted, medical men have been very guilty in not teaching physiological morality, and now they are only working at results, not at causes. He replied that Metchnikoff did insist upon the necessity of moral teaching, and that he was the chief promoter of moral instruction that is now, in France being widely given to young men in colleges and to boys in school. So far the results of this experimentation have been negative.

The Pasteur hospital is very beautiful and quite unique in its details. The walls of the corridors are of glass, through which one sees into the small individual rooms. The upper parts of the dividing walls are also of glass. Everything is of the most scrupulous surgical cleanliness and all appliances and fittings are of the very latest in hos-

pital perfection. The anonymous donor stipulated that the nursing service should be given to a religious order, and a staff of Sisters belonging to an Irish mother house, or at least of Irish extraction, has been placed there. The order is a comparatively modern one and the Sisters are practical nurses. The Mother Superior, before taking charge, went through the English hospitals and studied nursing methods,—so we were told by the Sister who showed us around, and who spoke her fluent French with the prettiest little touch of Irish brogue. The Sisters here do all of the real nursing themselves—there are no servant-nurses, though there are some lay-sisters for the cleaning. They wear full white linen gowns which completely cover their black habits, and an extremely pretty and becoming white headgear. In each patient's room hangs another gown, and on entering, the nursing Sister puts this on, and takes it off on leaving. The patients show that they are well cared for, and these Sisters are ready and willing to show their case histories and to explain about the treatment. It is evident that they have the real nursing spirit. I must close in quoting two sentences of Pasteur's which seem to me of universal application: "If I spent a day without work," he said once "I should feel as if I had committed a theft." And of theory and practice he said "Without theory, practise is only a routine given by custom."

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#### ITEMS

*The Nurses' Journal* (organ of the Royal British Nurses' Association) calls the last attempts of the Hospital Central Committee to get the nurses in its grip "a moral and mental somersault."

MOST of the English training schools, says *The British Journal of Nursing*, have lengthened their course of training to four years. At the Royal Edinburgh Infirmary a good set of post-graduate lectures has lately been established.

THE daily papers report the final exit of the Augustinian nuns from the Hotel Dieu of Paris, on January 15th, and *The British Journal of Nursing* describes a touching scene when they left, M. Mesureur having addressed them with great kindness and consideration.

THE latest numbers of *The German Nurses Journal* contain interesting accounts of Sister Karll's travels in behalf of organization, and the relation of the entire early growth of the modern movement in Germany—splendid material all ready for the third volume of the History of Nursing. The German Nurses' Association is now developing

local branches, and Cologne has an active center, closely affiliated with the central office in Berlin.

MISS PEARSE, the able and enthusiastic head of the London County Council Public School Nurses, has been called into conference with the consultation committee of the Board of Education, in regard to the age of admission for very young children. Miss Pearse is also to have in charge a nurse from Holland, who is being sent to London to study school nursing. It is gratifying to know that this is an outcome of the papers on School Nursing read last summer in Paris.

THE recent numbers of *La Garde-Malade Hospitalière* published in Bordeaux give a full list of all the notable persons who have visited the Bordeaux schools of nursing and that of Béziers. The list is indeed an impressive one, and contains many of the most important officials and men in public life in France. It is most encouraging to know that the admirable work in nursing reform in the south of France is receiving the careful scrutiny of governmental heads and of important physicians. A full account of the school at Béziers is also given,—interesting and valuable history.

THE report on nursing in Finland, read at Paris and given in this number, was one of the great successes at the Paris Conference and Mme. Mannerheim, the nurse in charge of the Surgical Hospital in Helsingfors, took all hearts by storm. She has written lately with much hopefulness of the nursing outlook in Finland. The association has issued its own Journal and various other good things are being planned, but the daily press gives sinister hints of impending political trouble for Finland, and a gloomy foreboding for that brave and enlightened country presses on our spirits. May it prove to be unfounded.

THE French Minister of War intends placing trained nurses in the military hospital of Val-de-Grâce, and has sent circulars to all the French schools announcing the conditions. They do not seem to us very well advised, nor promising for success, but time and experimentation will show. The nurses will be chosen from graduates of schools approved by the Minister. There is to be no superintendent of nurses, not even a head-nurse—a serious omission. Nurses cannot do their best when dropped into a hospital under the sole direction of physicians and military administrators, as we know by experience. There must be a woman head, proper grading of rank, and the ward management must be in the hands of a head-nurse, to give the best results. Military house-keeping is a fearful and a wonderful thing.